

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Newfield Production Company
Well Name/Number: Gustafson #1-13PH
Location: NW NW Section 13 T31N R9W
County: Glacier, **MT;** **Field (or Wildcat)** W/C

Air Quality

(possible concerns)

Long drilling time: 15 to 30 days drilling time.

Unusually deep drilling (high horsepower rig): No, triple derrick drilling rig for a 8247' TD vertical hole, Cambrian Formation test.

Possible H2S gas production: Possible H2S.

In/near Class I air quality area: Yes, Class I air quality area, Blackfeet Reservation.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Triple derrick drilling rig to drill a vertical Cambrian Formation test to 8247' TD.

Water Quality

(possible concerns)

Salt/oil based mud: Use freshwater and freshwater mud system on drilling surface and main vertical hole to total depth.

High water table: No high water table anticipated.

Surface drainage leads to live water: Yes, unnamed ephemeral tributary drainage to the Two Medicine River, about ¼ of a mile to the west northwest and 3/8 of a mile to the northeast from this location.

Water well contamination No, water wells nearby or within 1 mile of this location in any direction. Surface casing hole will be drilled with freshwater and freshwater muds to 1000' and steel surface casing run and cemented to surface to protect groundwater.

Porous/permeable soils: Yes, sandy silty soils.

Class I stream drainage: Closest Class I stream drainage is the Two Medicine River, about 1.5 miles to the north from this location.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: _____

Comments: 1000' of surface casing cemented to surface adequate to protect freshwater. Also, fresh water mud systems to be used on surface hole and intermediate string hole.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: None anticipated.

High erosion potential: No, small cut, up to 1.3' and small fill required up to 2.5', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, large, 420'X320' location size required.

Damage to improvements: Slight, surface use is cultivated fields.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other _____

Comments: Using existing highway, US Highway 89 and existing ranch trail. Access off existing ranch trail, approximately 1/16 of a mile of new road will be constructed into this location. Cuttings will be buried in the lined reserve pit. Drilling fluids will be allowed to dry in the lined pit. Pit will be backfilled when dry. No special concerns

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: No residences within a 1 mile radius of this wellsite. The town of Browning, Montana is 13.9 miles to the northwest and Valier, Montana is 12.1 miles to the southeast from this location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Triple derrick drilling rig 15 to 30 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: No concerns, proper BOP stack and surface casing should be able to control any problems that occur.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None, identified

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endanger in Glacier County are Grizzly Bear, Canada Lynx and Bull Trout. Candidate species are

the Wolverine, Sprague's Pipit and the Meltwater Lednian Stonefly. NH tracker website lists 0 species of concern.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: _____

Comments: Private cultivated surface lands. Drilling of this well should not impact any of species listed above. No concerns

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: _____

Comments: Private cultivated surface lands. No concerns.

Social/Economic

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: No concerns

Remarks or Special Concerns for this site

Well is a vertical Cambrian Formation test hole to 8247'.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected . Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): \s\Steven Sasaki

(title:) Chief Field Inspector

Date: June 19, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Glacier County water wells
(subject discussed)
June 19, 2011
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES
MONTANA COUNTIES, Glacier County
(subject discussed)

June 19, 2011
(date)

Montana Natural Heritage Program Website
(Name and Agency)
Heritage State Rank= S1, S2, S3 T31N R9W
(subject discussed)

June 19, 2011
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection: _____